

Lot Coverage Notes

4/28/2021

1. Working Concepts:

- The R-1 and R-2 zoning districts include three options for one-family (SF) lots. SF proposals use either the R-1 SF lot (7,000 SF min.) or the R-2 SF cottage lot (3,000 SF min.) and rarely (never?) use the detached R-2 SF lot option (5,000 SF min.) – essentially giving Columbia two working standards for detached SF.
- R-2 also includes an option for attached SF.
- The UDC includes two housing density bonuses – both of which use a reduction in the R-1 or R-2 lot size as the “bonus” if the sub-division meets the requirements for “solar oriented” and/or “open space.” Neither of the initiatives is used by developers.
- This means the R-2 cottage lot is the only “working” option for builders wanting to build detached SF on lots less than 7,000 SF. While a “cottage lot” is considered a SF dwelling, questions have been raised regarding scale and density when located adjacent to R-1 zones.
- **QUESTION: while the density bonuses indicate Columbia is willing to reduce the size of R-1 and R-2 lots in order to promote good planning and construction of SF housing, apparently, as developed, the bonuses aren’t usable by the building community – how else can the UDC facilitate SF construction on lots smaller than 7,000 SF in R-1 and R-2?**

2. Summary: UDC’s existing SFH options:

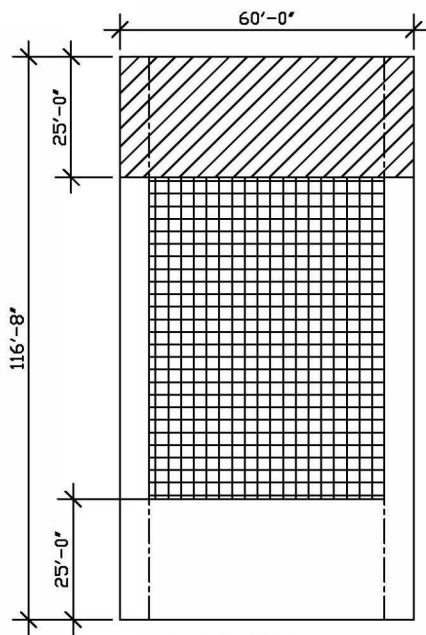
- R-1 detached SF:
 - Min. lot area: 7,000 SF
 - Min. width: 60’-0”
 - Min. front yard: 25’-0”
 - Min. rear yard: lesser of 25’-0” or 30% of lot depth
 - Min. side yard: 6’-0”
 - Max. height: 45’-0”
- R-2 detached SF:
 - Min. lot area: 5,000 SF
 - Min. width: 60’-0”
 - Min. front yard: 25’-0”
 - Min. rear yard: lesser of 25’-0” or 25% of lot depth
 - Min. side yard: 6’-0”
 - Max. height: 45’-0”
- R-2 attached SF:
 - Min. lot area: 3,500 SF
 - Min. width: 60’-0” (30’-0” each)
 - Min. front yard: 25’-0”
 - Min. rear yard: lesser of 25’-0” or 25% of lot depth
 - Min. side yard: 6’-0”
 - Max. height: 45’-0”
- R-2 cottage SF:
 - Min. lot area: 3,000 SF
 - Min. width: 30’-0”
 - Min. front yard: 10’-0”
 - Min. rear yard: 10’-0”
 - Min. side yard: 6’-0”
 - Max. height: 35’-0”

3. Summary: UDC's existing housing density bonuses:

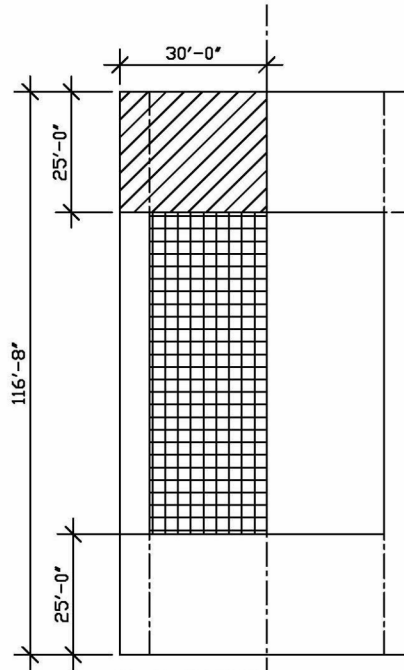
- Solar orientation density bonus – R-1 or R-2 subdivisions in which 75% min. of the lots are created on blocks with the long dimension of the block oriented within 15 degrees of true east-west, the max. number of lots shall be increased by 10% above the number of lots permitted and size and width shall be reduced by 15% (ie: R-1: 5,950 SF and 51'-0" wide; R-2 SFH: 4,250 SF and 51'-0" wide)
 - Comment: can only be used in subdivisions where the parcel size, orientation and topography supports the necessary block and street layout.
- Rural Cluster Density Bonus – in R-1 or R-2 subdivisions which preserve 50% min. of the gross land in open space protected from future development the minimum lot size and width shall be adjusted to allow the parcel to contain 10% more lots if 50% of gross area had not been protected.
 - Comment: fitting 110% of the total number of lots on 50% of a parcel by reducing lot areas and widths, but not setbacks, results in lots with unrealistic building areas.

4. Lot Coverage - currently, the UDC controls building area by minimum lot size and set-backs only – an additional prescriptive measure to consider is: lot coverage

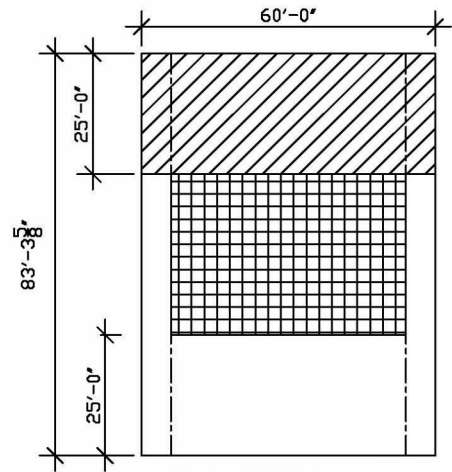
- "Lot coverage" is defined by municipalities in a variety of ways including, but not limited to:
 - Enclosed ground floor area of all buildings on the lot
 - Land covered by principal building and accessory structures
 - Areas covered by buildings or roofed areas
 - Area covered by building or structure when viewed from above (ie: including some roof overhang); exceptions may be identified (eg: overhangs limited to X'-0")
 - All bldgs & structures; does not apply to on-site parking & private swimming pools
 - Areas covered by: buildings, structures, parking areas, driveways, other paved areas
 - The total area of all buildings, measured at grade, all accessory structures including pools, patios, etc., and all paved areas as a percentage of the total area of the lot, with the following exceptions: sidewalks or paved paths no wider than five (5) feet, pervious pavement, green roofs and decks.
- Based on the UDC's required lot areas and set-backs, the diagrams below show the approximate resultant lot coverage for R-1 and R-2 SF lots.
 - The "median" lot coverage for detached and attached SF appears to be 46%-47%.
 - The lot coverage on a detached R-2 SF 5,000 SF lot is 30%. This means on lots less than 7,000 SF, the builder is simply losing buildable area if they use the detached R-2 SF standard.
 - The lot coverage on a R-2 SF cottage lot of approximately the same size (4,970 SF) would be 58% or almost twice the buildable area. But also ~10% more than R-1 SF.
- **Adding a row for "lot coverage" to Table 4.1-1 Dimensional Standards for Residential Districts could:**
 - Better ensure a consistent level of building density in a neighborhood regardless of lot size.
 - Relax the dependency on set-backs alone – and allow standards such as the standard R-2 SF to become relevant/useful.
 - In lieu of the bonus densities, permit the straight inclusion of reduced lot size(s) in the R-1 district with appropriate set-backs and a lot coverage percentage – with or without additional conditions/restrictions.
 - Provide a baseline when evaluating PUD requests.



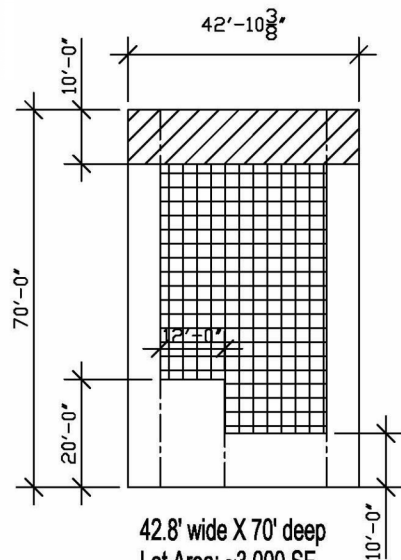
60' wide X 116'-8" deep
 Lot Area: 7,000SF
 House Footprint: 3,200 SF
 Area of backyard: 1,500 SF
 Coverage: 46%
 R1 detached - SFH



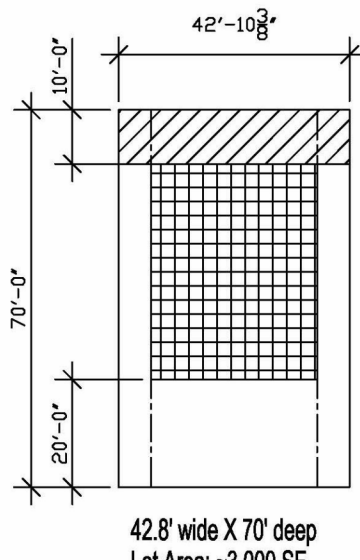
30' wide X 116'-8" deep
 Lot Area: 3,500 SF
 House Footprint: 1,600 SF
 Area of backyard: 750 SF
 Coverage: 46%
 R2 - SFH attached



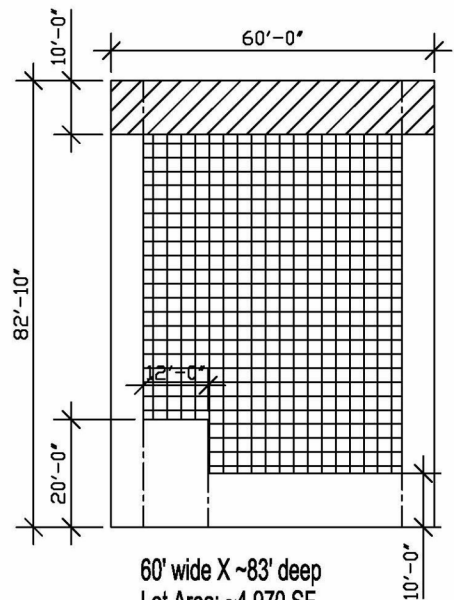
60' wide X 83'-4" deep
 Lot Area: 5,000 SF
 House Footprint: 1,498 SF
 Area of backyard: 1,500 SF
 Coverage: 30%
 R2 detached - SFH



42.8' wide X 70' deep
 Lot Area: ~3,000 SF
 House Footprint: 1,423 SF
 Area of backyard: 429 SF
 Coverage: 47%
 R2 cottage - min. lot w 10' front setback



42.8' wide X 70' deep
 Lot Area: ~3,000 SF
 House Footprint: 1,234 SF
 Area of backyard: 429 SF
 Coverage: 41%
 R2 cottage - min. lot w 20' front set-back



60' wide X ~83' deep
 Lot Area: ~4,970 SF
 House Footprint: 2,896 SF
 Area of backyard: 600 SF
 Coverage: 58%
 R2 cottage - large lot

Lot Coverage Research Notes:

- Maximum percentage of lot coverage in study ranged from 25% to 75%.
- Definitions for “lot coverage” varied and could include buildings, accessory buildings, paving and pools (see Item 4 above).
- Some municipalities have a prescribed percentage for buildings and a second percentage for buildings plus paved areas.
- Different zones, different sized lots and/or different building heights might be assigned a different lot coverage percentage. For example:
 - Kirkwood, MO allows 35% coverage for 1 and 1.5 story detached SF homes on lots 7,500 SF or less and reduces that to 30% coverage for 2 story detached SF homes on the same sized lots.
 - Lawrence, KS allows 50% lot coverage on their RS10 (10,000 SF min. lot), 45% lot coverage on RS7 (7,000 SF min. lot) lots and 40% lot coverage on RS5 (5,000 SF min. lot) and RS3 (3,000 SF min. lot) lots.
- Some municipalities that allow higher lot coverage percentages, also require a minimum usable open area (eg: Madison, WI).
- When defining “coverage,” consideration might be given to: when and how coverage is calculated (ie: at original home construction only?), what type of construction requires a permit (eg: building vs. paving) and what can be enforced. EG: if an owner can pave part of their lot after initial construction without a permit, say for a walk or patio, how is that included in the calculation?